

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-62. (Cancelled).

63. (Previously Presented) A method for simultaneously exposing an array of test compounds to a detector layer of physiologically viable cells, comprising:

- (a) providing an array of test compounds, wherein the test compounds are disposed on a support;
- (b) providing a porous membrane, wherein the porous membrane is constructed of a non-absorbent material with pores of regular and defined diameter which traverse the membrane directly from the upper to the lower side;
- (c) bringing the array of test compounds in close apposition with the detector layer so that the porous membrane is in contact with a liquid layer surrounding the detector layer and the porous membrane is in contact with the array of test compounds thereby allowing diffusion of the test compounds through the porous membrane to the detector layer.

64-65. (Cancelled).

67. (Currently Amended) The method according to claim 63 ~~any of claims 63 or 65~~, wherein the support is a non-porous substrate.

68. (Currently Amended) The method according to claim 63 ~~any of claims 63, 64 or 65~~, wherein the physiologically viable cells form a monolayer.

69. (Currently Amended) The method according to claim 63 ~~any of claims 63, 64 or 65~~, wherein the physiologically viable cells are supported by an optically clear substrate.

70. (Cancelled).

71. (Currently Amended) The method according to claim 63 ~~any of claims 63, 64 or 65~~, wherein the detector layer is held stationary in the field of view of an optical detector and the array of test compounds is moved into contact with said detector layer during the course of measurement.

72. (Currently Amended) The method according to claim 63 ~~any of claims 63, 64 or 65~~, wherein the array of test compounds is held stationary in the field of view of an optical detector and the

detector layer is moved into contact with said array of test compounds during the course of measurement.

73. (Currently Amended) The method according to claim 63 ~~any of claims 63, 64 or 65~~, wherein the array of test compounds is generated on the support by combinatorial chemistry.

74. (Previously Presented) A method for screening test compounds for bioactivity by simultaneously exposing an array of test compounds to a detector layer of physiologically viable cells, comprising:

- (a) providing an array of test compounds, wherein each compound is disposed on a support;
- (b) providing a porous membrane, wherein the porous membrane is constructed of a non-absorbent material with pores of regular and defined diameter which traverse the membrane directly from the upper to the lower side;
- (c) bringing the array of test compounds in close apposition with the detector layer so that the porous membrane is in contact with a liquid layer surrounding the detector layer and the porous membrane is in contact with the array of test compounds thereby allowing diffusion of the test compounds through the porous membrane to the detector layer; and

(d) detecting a response of the detector layer to the test compound.

75-77. (Cancelled).

78. (Currently Amended) The method according to claim 74 ~~any of claims 74, 75 or 76~~, wherein the response is recorded by a sequence of images.

79. (Currently Amended) The method according to claim 74 ~~any of claims 74, 75 or 76~~, wherein the detected response is a change in a luminescence property of the physiologically viable cells in the detector layer.

80. (Currently Amended) The method according to claim 74 ~~any of claims 74, 75 or 76~~, wherein the detected response is a change in a fluorescence property of the physiologically viable cells in the detector layer.

81. (Currently Amended) The method according to claim 74 ~~any of claims 74 or 76~~, wherein the support is a non-porous substrate.

82. (Currently Amended) The method according to claim 74 ~~any of~~

~~claims 74, 75 or 76~~, wherein the physiologically viable cells form a monolayer.

83. (Currently Amended) The method according to claim 74 ~~any of claims 74, 75 or 76~~, wherein the physiologically viable cells are supported by an optically clear substrate.

84. (Cancelled).

85. (Currently Amended) The method according to claim 74 ~~any of claims 74, 75 or 76~~, wherein the detector layer is held stationary in the field of view of an optical detector and the array of test compounds is moved into contact with said detector layer during the course of measurement.

86. (Currently Amended) The method according to claim 74 ~~any of claims 74, 75 or 76~~, wherein the array of test compounds is held stationary in the field of view of an optical detector and the detector layer is moved into contact with said array of test compounds during the course of measurement.

87. (Currently Amended) The method according to claim 74
~~any of claims 74, 75 or 76~~, wherein the array of test compounds
is generated on the support by combinatorial chemistry.